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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/536,898	03/28/2000	Hisashi Shimizu	10417-031001	5325

7590

09/24/2002

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EXAMINER

LOUIE, WAI SING

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/536,898

Applicant(s)

SHIMIZU ET AL.

Examiner

Wai-Sing Louie

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The finality of the previous office action is withdrawn in view of the response in paper no. 7. Please see the rejection below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Huang et al. (US 5,929,474), previously used.

With regard to claim 1, Huang et al. disclose an illuminating device (col. 3, line 39 to col. 6, line 53 and fig. 6) comprising:

- A hybrid integrated circuit substrate 25 in which at least a surface is provided with insulation (col. 4, line 19 and fig. 6 & 7);

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- A first electrode 16 and a second electrode 17 formed on the surface (fig. 1);
- A light-emitting element (LED) 40 connected with the first and second electrode (fig. 6);
- A seal 70 which is disposed in a periphery of the substrate (col. 6, lines 19-25 and 34-36);
- A transparent substrate 73 (col. 1, line 60), which is fixed to the hybrid integrated circuit substrate 25 via seal 70, to enclose the first and second electrodes 16 and 17 and the light-emitting element 40 within a sealed space formed between the hybrid integrated circuit substrate 25 and the transparent substrate 73.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (US 5,929,474).

With regard to claims 4 and 13, Huang et al. do not disclose having gas filled space between the hybrid integrated circuit substrate 25 and the transparent substrate 73. However, one with ordinary skill in the art would know that the bus wiring 16 and 17 could be oxidized when contacts with air. However, an inert gas atmosphere would prolong the life of the bus wiring.

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Therefore, it would have been obvious to one with ordinary skill in the art to have inert gas filled into the sealed space in order to prolong the life of the bus wiring.

With regard to claim 17, in addition to the limitation disclosed in claim 1, Huang et al. also disclose:

- A rear face of the light emitting element is electrical connected to the first electrode (fig. 1 & 2);
- An electrical connection 19 between the second electrode 17 and an electrode on a surface of the LED (fig. 1 & 3).
- The first electrode 16 and second electrode 17 are formed on a region of the surface of the hybrid integrated circuit substrate, but Huang et al. do not disclose the first electrode is made of copper with an oxidation resistant metal. Huang et al. disclose using gold and silver as contacts in the device (col. 3, line 38 and col. 6, line 2). One with ordinary skill in the art would use copper or aluminum as electrode, which is a cheaper material. However, copper is easily oxidized and an oxidization resistant metal may be used to coat the electrode such as plastic or noble metals. Therefore, it is obvious to coat the copper to prevent oxidation.

With regard to claim 18, in addition to the limitation disclosed in claims 17 above, Huang et al. also disclose:

- An electrical connection 20 between the second electrode 11 and an electrode on a surface of the LED (fig. 1 & 5).

With regard to claim 15, in addition to the limitation disclosed in claim 1, Huang et al. also disclose:

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- Huang et al. disclose the substrate 73 is made of glass (col. 1, lines 60-61).

With regard to claim 5-12 and 14-16, please see the description of record.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (703) 305-0474. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (703) 306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

wsl

September 10, 2002


OLIK CHAUDHURI
SUPERVISORY PATENT EXAMINER
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